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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,246	12/12/2003	Keiichi Serizawa	246632US2	9473

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,246	Applicant(s) SERIZAWA ET AL.	
	Examiner Hai C. Pham	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 6-18, 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on 11/03/05 is acknowledged. The traversal is on the grounds that "a search and examination of the entire application would not place a serious burden on the Examiner". This is not found persuasive because a serious burden is demonstrated by the separate sub-classification. Moreover, the structure of the assembly of the optical detecting units as claimed in Group I, namely an intermediate member being inserted between the optical detecting units and the housing, is irrelevant to either Groups II or III, which requires positioning the optical detecting unit within the housing so as to minimize the displacement of the optical detecting unit due to heat transfer or mounting the plural optical detecting units so that the distance between each of the optical detecting units and the center of the rotating mirror deflector is the same, respectively.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 6-18 and 21-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/03/05.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer (U.S. 4,826,268) in view of Matsushita et al. (U.S. 6,411,325).

Kramer discloses an optical scanner in a xerographic printing system comprising a scanning optical system (hologon deflector 44) that forms an optical scanning path, a pair of optical detecting units (start-of-scan and end-of-scan detectors 118a and 118b) arranged at two positions on the optical scanning path for detecting a write-start position and a write-end position to measure a time for scanning from the write-start position to the write-end position, and an optical housing (housing 10) that houses at least the scanning optical system and the optical detecting units (col. 6, lines 26-38), wherein the optical detecting units are mounted on the optical housing via an intermediate member (each of the detectors 118a and 118b is mounted on the common wall 37 of the housing 10 via an intermediate member as showed in Figs. 2 and 4).

With regard to claim 19, Kramer also teaches the xerographic printing system including an image carrier (drum 93), forming a toner image by developing an electrostatic latent image written on the image carrier with a toner (using the developer), and transfers the toner image onto a recording medium (transfer charger),

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and a fixing unit (not shown) that fixes the toner image transferred on the recording medium (Fig. 8).

Kramer fails to teach the intermediate member having a thermal expansion coefficient smaller than that of the optical housing.

Matsushita et al. discloses an electrophotographic recording device having an optical box or optical base (70) on which are mounted different optical elements, i.e., laser source (10), scanning lens (104), print start detector (60), each of the optical elements being secured to the optical box with individual mounting part, which has a low thermal expansion coefficient as compared to that of the optical box so that the optical path of the laser beam shift less from the original position due to the heat generated during the printing operation.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the intermediate member/mounting part with a low thermal expansion coefficient to secure the beam detectors onto the optical housing of Kramer device as taught by Matsushita et al. The purpose for doing so would have been to prevent misalignment of the optical path with respect to the beam detecting units.

Kramer also teaches:

- the intermediate member is mounted on the optical housing at a position having least thermal deforming (the beam detectors and corresponding intermediate members are mounted on the wall 37 of the housing 10);

- a side of the write-start position of the intermediate member is mounted on the optical housing (the bottom face of the intermediate member being secured to the wall of the housing).
- the scanning optical system forms a plurality of optical scanning paths (the optical scanner having two laser light sources (col. 7, lines 23-38) (Figs. 6 and 8);
- the intermediate member is fixed to the image forming apparatus together with the optical housing, by using a mounting member (brackets or mounting pads 54) for mounting the optical housing on the image forming apparatus (col. 3, lines 27-31) (Fig. 1).

Allowable Subject Matter

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


6. The following is a statement of reasons for the indication of allowable subject matter: the primary reason for the indication of the allowability of claim 5 is the inclusion therein, in combination as currently claimed, of the limitation "wherein the thermal expansion coefficient of the intermediate member provided for each of the optical scanning paths is made different from each other", which is not found taught by the prior art of record considered alone or in combination.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM
PRIMARY EXAMINER

January 9, 2006